Detailed Action

Election/Restrictions

1. Claims 22-29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention. Applicant is requested to correct the status identifier of said claims to reflect that they are withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 20, 21, 31, 35-40 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sano et al (US 5,326,811) in view of Morimoto (JP 2000-345031A) and Jeong et al (US 6,476,105).

Sano teaches a plated molded article comprising a polyamide resin in amounts of 30-80wt% and a polyphenylene ether resin in amounts of 20-70wt% (abstract). The polyamide is herein understood to read on the claimed "matrix resin that has a water absorption after 24hr in 23C water, according to ISO62, of at least 0.6%" since it is compositionally identical to one of applicant's preferred embodiments (see claim 18). The polyamide may comprise polyamide 6 (claim 16) or nylon 66 and the polyphenylene ether may comprise poly (2, 6-dimethyl 1, 4-phenylene ether) (claim 3). The molded article is useful as automotive components (col 1, lines 5+).

Sano does not teach that the polyamide composition may further comprise component (C)-pentaerythritol. However, Morimoto teaches 0.05-5wt% dipentaerythritol may be added to polyamide compositions in order to give good fluidity and mechanical strength properties (abstract). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add dipentaerythritol to the polyamide composition of Sano. The motivation for doing so would have been to improve the composition's flow and mechanical strength properties.

Sano also does not teach the composition may further comprise a phosphorous compound (E). However, Jeong teaches that fire retardant materials such as triphenyl phosphate may be added to polyamide compositions in order to improve their fire retardant properties (col 3, lines 55+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add triphenyl phosphate to the composition of Sano in an amount sufficient in order to obtain the desired fire retardant properties.

With respect to claimed surfactant/emulsifying agent (D), Sano incorporates by reference the teachings of US 3,257,357 with regards to making the polyphenylene ether. In said reference, it is taught that a surfactant (emulsifying agent) may be added to the polyphenylene ether during polymerization (see col 2, lines 54+). This is similar to the manner in which applicant incorporates the emulsifying agent (page 11, first full paragraph in the specification). While Sano is silent to the amount of surfactant, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a surfactant in amounts sufficient in order to obtain the desired processability and

polymerization properties of the composition. Furthermore, olefin sulfonates are conventional emulsifiying agents (see 2002/0045056; 0068) which are well known in the art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize conventional emulsifiers such as olefin sulfonates in the composition taught in Sano. The motivation for doing so would have been that such compounds are conventionally used in the art for said purpose.

With regard to claim 20, the molding of Sano is herein understood to inherently meet the claimed adhesive strength since the plated molded article therein is compositionally and structurally identical to the claimed article.

Response to Arguments

Applicant's arguments filed 1/12/2012 have been fully considered but they are not persuasive.

Applicant argues the plated resin molded article of the present invention exhibits unexpectedly high adhesive strength between a thermoplastic resin molded article and a plating resin. In order to establish the non-obviousness of the claimed invention, applicant has filed a 1.132 Declaration by Toshiro Tai and points to examples 7-9 in the originally filed specification. Applicant argues the amended claims agree in scope with the evidence presented. Said argument has been fully considered but is not persuasive because the showing is not commensurate in scope with the claimed invention. The showing is not made with regards to both water soluble substances currently claimed. The showing also is not made over the entirety of the claimed compositional range-all

the compositions have a 60/40% composition with regards to components A&B. Furthermore, the examples comprise 0 or 2% component C, 0 or 10% of component D and 0 or 2% E. The showing is not commensurate because it is not made with regards to any specie of polyphenylene ether or polyamide resin. Furthermore, the examples are plated in by a specific method whereas the claimed invention is directed toward any method of plating (electroless, sputtering, vapor deposition, etc).

For the reasons noted above, applicant's arguments are not persuasive.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN R. KRUER whose telephone number is (571)272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin R Kruer/
Primary Examiner, Art Unit 1787